

USSR/Human and Animal Physiology (Normal and Pathological)
Metabolism. Vitamins.

T

Abs Jour : Ref Zhur Biol., No 6, 1959, 26290

Author : Kamenetskiy, Sh. Ye.

Inst : Vinnitsa Medical Institute

Title : Providing Vitamin C to the Organism of Patients with
Peptic Ulcer

Orig Pub : Sb. nauchn. tr. Vinnitsk. med. in-ta, 1957, 14, 14-27

Abstract : In 56 patients with peptic ulcer, and in 11 healthy people,
the provision of the organism with ascorbic acid (AA) was
determined by loading, and, in 26 patients also the con-
centration of AA in blood plasma and blister fluid and the
index of absorption of AA by blood proteins according to
Eidelman and Gordon. In almost all patients, a conside-
rable disruption of C-vitamin provision was discovered.

Card 1/2

- 16 -

KAMENETSKIY, Sh.E.

~~Vitamin A requirements in peptic ulcer [with summary in English].~~
Vop.it. 17 no.2:50-54 Mr-Apr '58. (MIRA 11:4)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. - prof. B.S. Shklyar) Vinnitskogo meditsinskogo instituta.
(VITAMIN A DEFICIENCY, diagnosis
determ. of degree of defic., method (Rus))

KAMENETSKIY, Sh. E. Doc Med Sci -- (diss) ^{Providing} ~~Provision of~~ vitamins ^{to} ~~for~~ the organism
of ulcer patients." Mos, 1959. 15 pp (Min of Health USSR. Central Inst for
the Advanced Training of Physicians), 200 copies (KL, 45-59, 149)

VORONOV, Abram Solomonovich; KAMENETSKIY, S.I., red.; SHNEYDER, M.S., red.; MAILYAN, S.L., red.; CHUCHUPAK, V.D., tekhn. red.

[Hospital therapy] Gospital'naia terapiia. Kiev, Gosmedizdat, USSR, 1962. 522 p. (MIRA 15:4)

1. Zaveduyushchiy kafedroy gospital'noy terapii Donetskogo meditsinskogo instituta (for Voronov).
(MEDICINE, CLINICAL)

BOKSEMAN, A.A.; ZAZOVSKIY, F.Ya.; KAMENETSKIY, S.G.

Determination of reservoir parameters from research data on
the nonstationary flow of gas cut fluid. Nauch.-tekhn. sbor.
po dob. nefli no.19:34-39 '63. (MIRA 17:8)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.

KAMNETSKIY, S.G.; KURENKOV, O.V.

Integral method for determining the reservoir compressibility
factor from field data. Nefteprom. delo no.7:7-9 '64.

(MIRA 17:8)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.

KAMNETSKIY, S.G.; NEYMAN, Ye.A.

Detecting the oil-water boundary shift in control wells. *Trudy*
MNI no.12:224-230 '53. (MLRA 9:8)
(Hydrodynamics) (Petroleum engineering)

KAMENETSKIY, S. G.

24-11-11/31

AUTHORS: Barenblatt, G.I. Borisov, Yu. P., Kamenetskiy, S. G. and Krylov, A. P. (Moscow)

TITLE: On determining the parameters of an oil bearing stratum from data of the pressure build-up in stopped wells.
(Ob opredelenii parametrov neftenosnogo plasta po dannym o vosstanovlenii davleniya v ostanovlennykh skvazhinakh)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1957, No.11, pp.84-91 (USSR)

ABSTRACT: In this paper a method is described of determining the parameters of the stratum and the well from the initial section of the bottom-hole pressure build-up characteristic. The method is based on an accurate solution of the respective inverse problems of the theory of the elastic regime and involves calculation of the integrals of an empirical function representing the pressure build-up characteristic. The approximate calculation of the integrals is effected much more accurately than the approximate calculation of the derivatives and particularly of the second derivatives of the empirical function. The method is applicable equally to gusher wells, compressor Card 1/2 and pump operated wells. It is shown in the paper that a

24-11-11/31

On determining the parameters of an oil bearing stratum from data of the pressure build-up in stopped wells.

slight modification of the method permits determining the parameters of the stratum from the data of the changes in the flow rate and the pressure of the liquid at any transient regime and not only from the data on the bottom-hole pressure build-up characteristic in the stopped well. The method is also applicable to gas bearing strata. The application of the method is illustrated by two examples, one relating to data derived from model tests and another from a well with a flow rate prior to stoppage of 115 tons per day and a specific gravity of the oil in the stratum of 0.825 exploited through a 6 inch dia. column, a 2.5 inch dia. of the lifting tube with data of the pressure build-up characteristic as given in the Table, p.91.

There are 3 figures, 1 table and 17 references, 13 of which are Slavic.

SUBMITTED: June 10, 1957.

ASSOCIATIONS: Oil Institute Ac.Sc. USSR (Institut Nefti AN SSSR),
All Union Scientific Oil Research Institute (Vsesoyuznyy
Nauchno-Issledovatel'skiy Neftyanoy Institut)

AVAILABLE: Library of Congress.
Card 2/2

BOKSERMAN, A.A.; ZAZOVSKIY, F. Ya.; KAMFNETSKIY, S.G.

Determining reservoir parameters from the data of an investigation of a nonsteady inflow of a gas-liquid mixture. Neft. khoz. 41 no.7:44-48 J1'63 (MIRA 17:7)

KAMENETSKIY, S.G.

Optimum method for the development of layers. Trudy VNI 12:323-330
'58. (MIRA 12:3)
(Oil reservoir engineering) (Oil fields--Production methods)

KAMENETSKIY, S.G.

Evaluation of the nonuniformity of a layer based on pressure
build-up curves. Nauch.-tekh. sbor. po dob. nefti no.15:72-77
'61. (MIRA 15:9)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.
(Oil sands--Permeability)

KAMENETSKIY, S. G.

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AFANASIEVA, A.V., BAISHEV, B.T., VORISOV, YU.P., VASILYEVA, V.M.,
VOINOV, V.V., ZINOVIEVA, L.A., KAMENETSKIY, S.G., MAKISOV, M.I.,
MAKISOV, M.M., MAYDEBOR, V.N., NOVIKOV, I.P., SOKOLOVSKIY, E.V.,
SUSHILIN, V.A., YAKOVLEV, V.P.

Problem of developing oil in the USSR

Report to be submitted for the Sixth World Petroleum Congress
Frankfurt, 16-26 June 63

HOKSERMAN, A.A.; ZAZOVSKIY, F.A.; KAMENETSKIY, S.G.

Determining the reservoir parameters for a nonsteady
bubble fluid flow to the well bottom. Nauch.-tekh.
sbor. po dob. nefti. no.21:37-42 '63. (MIRA 17:5)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy
institut.

KAMENETSKIY, S.G.

Determining flow parameters by the pressure restoration
method when the reservoir is divided into separate interstrati-
fications. Nauch.-tekh.sbor. po dob.nefti. no. 14:46-50 '61.
(MIRA 17:6)

KAMENETSKIY, S.G.

Effect of inertial forces in nonsteady fluid flow. Nauch.-tekh.
sbor. po dob. nefti no.22:33-35 '64. (MIRA 17:9)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.

ZAZOVSKIY, F.Ya.; KAMENETSKIY, S.G.

Change in the coefficient of piezoconductivity in an oil reservoir
with a pressure equal to the saturation pressure or close to it.
Nefteprom. delo no.6:3-7 '65.

(MIRA 18:10)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.

KAMENETSKIY, S. I.

see also KAMENETSKIY, Sh. E.

KAMENETSKIY, S.I.

ASTROZHNIKOV, Yu.V., kand.med.nauk; KAMENETSKIY, S.I.

Wounds of the heart and foreign bodies in the alimentary canal.
Khirurgia Supplement:12-13 '57. (MIRA 11:4)

1. Iz khirurgicheskogo otdeleniya 1-y Bel'tskoy gorodskoy bol'nitsy
i khirurgicheskogo otdeleniya Bratshanskoy rayonnoy bol'nitsy
Moldavskoy SSR.

(HEART--WOUNDS AND INJURIES)
(ALIMENTARY CANAL--FOREIGN BODIES)

KAMENETSKIY, S.I., dotsent; LYUBOMUDROV, V.Ye., kand.med.nauk;
ZHIVOTOVSKAYA, I.A.; MATEYEVA, K.M.

Early diagnosis and treatment of periarteritis nodosa. Vrach.
delo no.5:34-37 My '62. (MIRA 15:6)

1. Kafedra fakul'tetskoy terapii II (zav. - dotsent S.I.
Kamenetskiy) Donetskogo meditsinskogo instituta i klinicheskiy
otdel (ispolnyayushchiy obyazannosti rukovoditelya - kand.med.
nauk V.Y. Lyubomudrov) Donetskogo nauchno-issledovatel'skogo
instituta fiziologii truda.

(ARTERIES--DISEASES)

VORONOV, Abram Solomonovich, prof.; KAMENETSKIY, S.I., red.; SHNEYDER,
M.S., red.; MAILYAN, S.L., red.; CHUCHUPAK, V.D., tekhn. red.

[Hospital therapy]Gospital'naia terapiia. Kiev, Gosmedizdat,
USSR, 1962. 522 p. (MIRA 16:2)

1. Zaveduyushchiy kafedroy gospital'noy terapii Donetskogo
meditsinskogo instituta (for Voronov).
(HOSPITAL THERAPY)

KAMENETSKIY, S.I., dotsent; LYUBOMUDROV, B.Ye.; ZHIVOTOVSKAYA, I.A.;
MATVEYEVA, K.M.; OFFENGENDEN, S.M. (Donetsk)

Pulmonary diseases in systemic vasculitis. Klin.med. no.12:72-
78 '61. (MIRA 15:9)

1. Iz kafedry fakul'tetskoy terapii No.2 (zav. - dotsent S.I. Kamenetskiy) Donetskogo meditsinskogo instituta (dir. - dotsent A.M. Ganichkin) i Donetskogo nauchno-issledovatel'skogo instituta fiziologii truda (dir. - kand.med.nauk B.N. Chopko).
(LUNGS---DISEASES) (PERIARTERITIS NODOSA)

KAMENETSKIY, S.I.; VINYUKOV, V.G. (Donetsk)

Relativity of counterindications to the use of glycocorticoid hormones in a specific case of diabetes mellitus. 14a Probl. endok. i gorm. 8 no.2:123-124 Mr-Ap'62. (MIRA 16:7)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav.-dotsent S.I.Kamenetskiy) pediatricheakogo i sanitarno-gigiyenicheskogo fakul'tetov Donetskogo meditsinskogo instituta i 1-y gorodskoy bol'nitsy (glavnyy vrach M.M.Khanovich).
(DIABETES) (GLYCO-CORTICIDS)

KAMENETSKIY, S.P., kand. tekhn. nauk

✓
Technological aspects of making swollen perlite and perlite
products. Stroi.mat. 5 no.3:11-15 Mr '59. (MIRA 12:5)
(Perlite (Mineral))

KAMENETSKII, S. F.

Thermal Insulator. S. P. Kamenetskiĭ and M. Yu. Gorelov. Russ. 57,514, July 31, 1940. Granulated alkali metal silicate, which may be dusted with a refractory powder (such as talc or mica), is heated to about 650°

KAMENESKIY, S. P., Eng.

Insulation (Heat)

Heat insulating construction from prefabricated parts. Stor. mat. o nov.
tekh. v stroi. 15, No. 4, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.

KAMENETSKIY, S.P., inshener.

Heat insulating materials for building construction. Sbor.mat.o nov.tekh.v
stroi. 15 no.9:26-30 '53. (MLRA 6:10)

(Insulation (Heat))

KAMENETSKIY, S. P.

KAMENETSKIY, S. P.

"Investigation of the effect of certain technological factors in the production of sovelite on the properties of the material and the conditions of its utilization in construction." Min Higher Education USSR. Moscow Order of Labor Red Banner Construction Engineering Inst imeni V. V. Kuybyshev. Moscow, 1956. (Dissertation for the Degree of Candidate in Technical Science).

SO: Knizhnaya letopis', No. 21, 1956. Moscow.

~~KAMENETSKII~~, Solomon Pavlovich; ~~LOSEV~~, B.S., inzhener, nauchnyy redaktor;
BEGAK, B.A., redaktor izdatel'stva; MEDVEDEV, L.Ya, tekhnicheskii
redaktor

[Heat insulating work] Teploizolatsionnye raboty. Moskva, Gos.
izd-vo lit-ry po stroit. i arkhitekture, 1956. 290 p. (MLNA 9:8)
(Insulation (Heat))

Kamenetskiy, S.P.

VORONKOV, Sergey Timofeyevich; ISEROV, David Zinov'yevich; KAMENETSKIY,
Solomon Pavlovich, kand.tekhn.nauk; ZELIKSON, H.M., red.; LARIONOV,
G.Ye., tekhn.red.

[Heat insulation for electric stations] Teplovaia isoliatsia na
elektricheskikh stantsiyakh. Pod boshchei red. S.P.Kamenetskogo.
Moskva, Gos.energ.izd-vo, 1958. 423 p. (MIRA 11:7)

(Electric power plants) (Insulation (Heat))

KAMNETSKIY, S.P., kand.tekhn.nauk

First industrial plant for manufacturing heat-insulating perlite
products. Strel. mat. 6 no.11;10-13 N '60. (MIRA 13:11)
(Perlite (Mineral)) (Insulation (Heat))

KAMENETSKIY, S.P.; UTKIN, V.V.; ZOTOV, A.V., nauchnyy red.; VOLNYANSKIY, A.G., glav. red.; SOKOLOV, D.V., zam. glav. red.; TARAN, V.D., red.; SEREBRENNIKOV, S.S., red.; MIKHAYLOV, K.A., red.; STAROVEROV, I.G., red.; VOLODIN, V.Ye., red.; NIKOLAYEVSKIY, Ye.Ya., red.; SHIROKOVA, G.M., red. izd-va; NAUMOVA, G.D., tekhn. red.

[Heat insulation work] Teploizoliatsionnye raboty. Moskva, Gos. izd-vo lit-ry po stroit., arkhitekt. i stroit. materialam, 1961. 439 p.
(MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut "Teploproyekt".
(Insulation (Heat))

BUDNIKOV, P.P.; ZHUKOV, A.V.; KAMENETSKIY, S.P.; POLINKOVSKAYA, A.I.;
STRIZHEVSKIY, M.V.

Light and superlight articles based on perlite are introduced
into mass construction. Stroi.mat. 7 no.8:8-15 Ag '61.

(MIRA 14:8)

(Perlite (Mineral)) (Lightweight concrete)
(Precast concrete construction)

KAMENETSKIY, S.P., kand.tekhn.nauk

Large-panel construction requires highly efficient insulators. Stroi.
mat. ? no.9:17-19 S '61. (MIRA 14:11)

(Insulating materials)

KAMENETSKIY, S.P., kand.tekhn. nauk; SHUBOVA, L.B., red.

[Perlite heat insulating materials; report] Perlitovye teplo-izoliatsionnye materialy; nauchnoe soobshchenie. Moskva, TSentr.biuro tekhn.informatsii, 1961. 57 p. (MIRA 15:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy institut "Teploproyekt."
(Insulation (Heat)) (Perlite (Mineral))

GRIGOROVICH, M.B.; KAMENETSKIY, S.P., nauchnyy red.; KUZNETSOV, V.A.,
red. izd-va; BYKOVA, V.V., tekhn. red.

[Industry's requirement as to the quality of mineral raw
materials] Trebovaniya promyshlennosti k kachestvu mineral'-
nogo syr'ya; spravochnik dlia geologov. Moskva, Gosgeoltekh-
izdat. No.21 [Diatomite, tripoli, opoka] Diatomit, trepel,
opoka. Izd.2., perer. 1962. 34 p. (MIRA 15:12)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut mi-
neral'nogo syr'ya.
(Diatomaceous earth) (Tripoli (Mineral)) (Opoka)

V.S.S.

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KAMENETSKIY, S.P., kand.tekhn.nauk

Technical and economic advantages of overall utilization of types
of perlite. Stroi.mat. 8 no.10:17-20 0 '62. (MIRA 15:11)
(Pearlite (Mineral))

KAMENETSKIY, S.P., kand.tekhn.nauk

The mechanism of the expansion of perlite and its technological
significance. Stroi.mat. 8 no.11:34-36 N '62. (MIRA 15:12)
(Perlite (Mineral))

KAMENETSKIY, S.P.; GURVICH, E.A., red.izd-va; KOMAROVSKAYA, L.A.,
tekh. red.

[Perlite; its properties, technology, and use] Perlity;
svoistva, tekhnologiya i primeneniye. Moskva, Gosstroiz-
dat, 1963. 279 p. (MIRA 16:9)
(Perlite (Mineral))

KAMENETSKIY, S.P., kand. tekhn. nauk

Valuable advantages of perlite heat insulation products.
Stroi. mat. 10 no.2:10-12 F '64. (MIRA 17:6)

VORONKOV, Sergey Timofeyevich; ISEROV, David Zinov'yevich;
KAMENETSKIY, Solomon Pavlovich, kand. tekhn. nauk;
SINEL'NIKOVA, L.N., red.

[Heat insulation in electric power plants] Teplovaia izo-
liatsiia na elektricheskikh stantsiakh. Izd.2., perer.
i dop. Moskva, Energiia, 1965. 471 p. (MIRA 18:5)

ZHUKOV, A.V., doktor tekhn. nauk; KAMENETSKIY, S.P., kand. tekhn. nauk

Ultralight weight inorganic heat-and sound-insulating
materials and their use. Zhur.VKHO 10 no.5:565-571 '65.
(MIRA 18:11)

27894-66 ENI(e)/ENI(m) WH

ACC NRI AP6017670

SOURCE CODE: UR/0063/69/010/005/0565/0571

AUTHOR: Zhukov, A. V. (Doctor of engineering sciences); Kamenetskiy, S. P.
(Candidate in engineering sciences)

22
B

ORG: none

TITLE: Superlight heat- and sound-insulating inorganic materials and their application

SOURCE: Vsesoyuznoye khimicheskoye obshchestvo. Zhurnal, v. 10, no. 5, 1965, 565-571

TOPIC TAGS: prospecting, petrology, glass

ABSTRACT: Among the numerous rocks used in construction and in the construction materials industry, in recent years perlite -- an acidic, volcanic, glasslike, water-containing rock -- has found increasing application. One feature of perlites is their capacity to swell when heated, with a manifold increase over initial volume and corresponding decrease in bulk weight. The swelling capacity of perlite rocks accounts for their effective use in the production of porous fillers, which serve as the basic constituent in lightweight concretes and in heat-insulating materials.

Ranking first in perlite reserves in the region of young volcanic formations of the Transcaucasus, in particular, the Armenian SSR, which has high quality expandable volcanic glasses -- perlite and

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UDC: 66.043.2

L. 27394-66

ACC NR: AP6017670

obsidian - readily accessible for exploitation. Large perlite reserves are also found in the Ukrainian SSR and in the Transcarpathians. Perlite rocks have been prospected in the Transbaykal Area, in the Primorskiy Kray, on Kamohatka, and in several other areas.

Depending on the structure and physicochemical properties of different varieties of perlite rocks, the parameters of the swelling process and the technology by which light porous fillers based on perlite are obtained - can vary substantially. Recently, comprehensive studies have been made on perlites from the most promising deposits of the Union; technological conditions have been refined for each kind of perlite in relation to the use of the expanded product. Orig. art. has: 7 figures and 3 tables. [JPRS]

SUB CODE: 08,12 / SUBM DATE: none / ORIG REF: 029 / OTH REF: 008

Card 2/2

L 04528-67 ENR(e)/ENT(m) WH

ACC NRT AP6030639 (A,N) SOURCE CODE: UR/0413/66/000/016/0155/0155

INVENTOR: Fayn, I. A. · Kamenetskiy, S. P.

9
B

ORG: none

TITLE: Ceramic mass for production of lightweight refractory products. Class 80,
No. 185254

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966,
155

TOPIC TAGS: refractory product, clay refractory product, ceramic material,
synthetic material, heat resistant material

ABSTRACT: An Author Certificate has been issued for a ceramic mass for produc-
ing lightweight refraction products. The mass contains a refractory clay, chamotte,
and expanded perlitic sand. To reduce the volumetric weight of the product up to
0.3--0.4 t/m³, the components of the ceramic mass are suggested of the following
composition (wt. %): 25--35 refractory clay, 50--60 chamotte, 10-15 swelled-up
perlitic sand, and, in addition, the mass must contain a solution of organic
saponifiable acids and synthetic resins in amounts of 0.2--0.5% when converted to
dry matter. [Translation] SUB CODE: 11/ SUBM DATE: 16 Jul 65/ [NT]

Card 1/1 eqh

UDC: 666.76:666.361.1:666.327:666.322

AUTHORS: Kamenetkiy, S.Ye. and Pinskiy, A.A. 47-58-2-14/30

TITLE: Device for the Demonstration of Mechanical Oscillations
(Ustanovka dlya demonstratsii mekhanicheskikh kolebaniy)

PERIODICAL: Fizika v Shkole, 1958, Nr 2, pp 62 - 64 (USSR)

ABSTRACT: Instruction are given on how to build a spring pendulum, with which various oscillations can be demonstrated to pupils. This pendulum consists of two stands joined by a cross bar on which the spring pendulum is fixed. The bob of the pendulum is connected with the springs attached to the bases of the stand. By varying the position of the stand, different kinds of oscillations can be obtained. There are 3 figures and 3 Soviet references.

ASSOCIATION: 692-ya srednyaya shkola, Moskva (The 692nd Secondary School, Moscow)

AVAILABLE: Library of Congress

Card 1/1 1. Physics-Study and teaching 2. Mechanical oscillations-Study and teaching

KAMENETSKIY, S.Ye. (Moskva)

Using the density curve of saturating steam in solving the problems
on air humidity. Fiz.v shkole 21 no.4:101-102 J1-Ag '61.
(MIRA 14:10)

(Humidity)

KAMENETSKIY, S.Ye. (Moskva)

Experience in conducting electrotechnical practicum. Fiz. v shkole
16 no.4:71-73 J1-Ag '56. (MLRA 9:9)

1.212-ya srednyaya shkola.
(Electric engineering--Study and teaching)

POKROVSKIY, A.A., kand.pedagog.nauk, starshiy nauchnyy sotrudnik;
BUROV, V.A., uchitel'; GLAZYRIN, A.I., starshiy nauchnyy sotrudnik,
pensioner; DUBOV, A.G., starshiy nauchnyy sotrudnik; ZVORYKIN, B.S.,
nauchnyy sotrudnik; KAMENETSKIY, S.Ye., uchitel'; KOSTIN, G.N., pre-
podavatel'; MIRGORODSKIY, B.Yu., uchitel'; OREKHOV, V.P., prepoda-
vatel'; ORLOV, P.P., prepodavatel'; RAZUMOVSKIY, V.G., aspirant;
ROMYANTSEV, I.M., aspirant; TEREENT'YEV, M.M., prepodavatel';
KHOLYAPIN, V.G., prepodavatel'; SHAKHMAYEV, N.M., nauchnyy sotrudnik,
uchitel'; VOYTKENKO, I.A., uchitel' sredney shkoly, pensioner; STA-
ROSTIN, I.I., prepodavatel'; MOGILKO, A.D., aspirant; SEMAKIN, N.K.;
KOPTEKOVA, L.A., red.; LAUF, V.G., tekhn.red.

[New school equipment for use in physics and astronomy] Novye
shkol'nye pribory po fizike i astronomii. Pod red. A.A.Pokrovskogo.
Moskva, Izd-vo Akad.pedagog.nauk RSFSR, 1959. 161 p. (MIRA 12:11)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut metodov
obucheniya. 2. Laboratoriya metodiki fiziki Instituta metodov obuche-
niya Akademii pedagogicheskikh nauk RSFSR (for Pokrovskiy). 3. Sred-
nyaya zheleznodorozhnaya shkola st.Kratovo, Moskovskoy oblasti (for
Burov). 4. Institut metodov obucheniya Akademii pedagogicheskikh nauk
(for Glazyrin, Dubov, Razumovskiy, Rumyantsev).

(Continued on next card)

POKROVSKIY, A.A.---(continued) Card 2.

5. Institut metodov obucheniya Akademii pedagog.nauk; srednyaya shkola No.315 Moskvy (for Zvorykin). 6. Srednyaya shkola No.212 Moskvy (for Kamenetskiy). 7. Krasnodarskiy pedinstitut (for Kostin). 8. Srednyaya shkola No.18 g.Smy (for Mirgorodskiy); 9. Ryazanskiy pedinstitut (for Orekhov). 10. Stalingradskiy pedinstitut (for Orlov). 11. Moskovskiy gorodskoy pedinstitut; srednyaya shkola No.443 Moskvy (for Terent'yev). 12. Balashevskiy pedinstitut (for Kholyapin). 13. Institut metodov obucheniya Akademii pedagog.nauk; srednyaya shkola No.215 Moskvy (for Shakmayer). 14. Moskovskiy pedinstitut im. V.I.Lenina (for Starostin). 15. Pedinstitut im. V.I.Lenina v Moskve (for Mogilko). 16. Zaveduyushchiy narodnoy astronomicheskoy observatoriyey Dvortsya kul'tury Moskovskogo avtozavoda im. Likhacheva (for Semakin).

(Physical instruments)

KAMENETSKIY, S.Ye. (Moskva)

Analyzing the results of measurements in laboratory work. Fiz.v
shkole 22 no.1:49-54 Ja-F '62. (MIRA 15:3)
(Physics—Study and teaching)

KAMENETSKIY, S.Ye. (Moskva)

Working with the educational motion picture "Molecules and
molecular movement." Fiz.v shkole 22 no.6:43-44 N-D '62.
(MIRA 16:2)

(Molecular theory—Study and teaching)
(Motion pictures in education)

BRONFMAN, V.V.; KAMENETSKIY, S. Ye. (Moskva)

Functional dependences in the physics and mathematics courses. Mat.
v shkole no.1:43-47 Ja-P '63. (MIRA 16:6)
(Physics--Study and teaching) (Mathematics--Study and teaching)
(Functions)

KAMENETSKIY, G.

Our method. Zhil.-kom. khoz. 9 no.4:22-24 '59. (MIRA 12:7)

1. Glavnyy inzhener Kaliningradskogo tramvaynogo tresta.
(Electric railway motors--Testing)

KAMENETSKIY V.A.

Feodorov, Yevgraf Stepanovich, 1853-1919; ANSHELES, O.M., redaktor; FRANK-
KAMENETSKIY, V.A., redaktor,

[Fundamentals of the study of figures] Nachalo uchenia o figurakh.
Red. i primechaniia O.M.Anshelesa i V.A.Frank-Kamenetskogo. (Moskva)
Izd-vo Akad. nauk SSSR, 1953 409 p. (MIRA 8:10)
(Geometry, Analytic)

MIKULA, G.A.; KAMNETSKIY, Y.A.

Improvement of the head part of a revolving diffuser. Sakh.
prom. 34 no.2:23-24 F '60. (MIRA 13:5)

1. Mironovskiy sakharney zavod.
(Mironovka (Kiev Province)--Sugar machinery)
(Diffusers)

SVETozAROV, V.A., inzh.; KAMENETSKIY, V.A., inzh.

Tractor with automatic friction transmission. Trakt. i sel'khoz mash.
31 no. 5:7-10 My '61. (MIRA 14:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii
sel'skogo khozyaystva.

(Tractors--Transmission devices)

KAMENETSKIY, V.A., inzh.; SLABOSPITSKIY, I.A., inzh.; CHEKRIZOV, L.G., inzh.

Results of testing tractors with automatic friction transmissions.
Trakt. i sel'khoz mash. 33 no.5:11-14 My '63. (MIRA 16:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii sel'skogo khozyaystva (for Kamenetskiy). 2. Kubanskiy gosudarstvennyy nauchno-issledovatel'skiy institut i sel'skokhozyaystvennykh mashin (for Slabospitskiy, Chekrizov).

KAMENETSKIY, V.A., inzh.

Using toroidal friction gears in the transmissions of
crawler tractors. Trakt. i sel'skozmash. 33 no.11:12-15
N '63. (MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii
sel'skogo khozyaystva.

KAMENETSKIY, V.D.; YAVORSKIY, B.M.

Calculation of absorption spectra for organic compounds. Fiz.
sbor. no. 3:88-92 '57. (MIRA 11:8)

1. Vsesoyuznyy nauchnyy institut tekstil'noy i legkoy promyshlen-
nosti.

(Organic compounds--Spectra)

Kamenetskiy, V.D.

HELEN'KIY, L.I.; KAZANSKAYA, M.Ye.; YAVORSKIY, B.M.; KAMENETSKIY, V.D.

Spectrophotometric analysis of leuco esters (with summary in English). Zhur.fiz.khim.31 no.7:1564-1572 J1 '57. (MIRA 10:12)

1. Institut khlopchato-bumazhnoy promyshlennosti, Moskva.
(Spectrophotometry) (Esters)

KAMENETSkiy, V.D.

PRIKHOT'KO, N.F.

24 (7) p 3 PHASE I BOOK EXPLOITATION SOV/1365

L'viv. Universytet

Materialy I Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'viv] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Itsi: Fizichnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Gazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Landsterg, O.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabianskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabrikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Milyanchuk, V.S., Candidate of Physical and Mathematical Sciences, and Glauberman, A. Ye., Candidate of Physical and Mathematical Sciences.

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Card 7/60

83350

S/139/60/000/004/006/033
E201/E591

16.4100
24.4500
AUTHORS:

Kamenetskiy, V. D. and Yavorskiy, B.M.

TITLE:

An Approximate Allowance for the Distortion of the Incident and Scattered Waves in Collisions of Slow Electrons with Atoms and Ions

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No.4, pp.66-73

TEXT: Interaction of slow particles on collision (e.g. collisions of slow electrons with atoms or ions) cannot be regarded as a perturbation in quantum-mechanical treatments and, consequently, the Born approximation is inapplicable. In such cases the main problem is the correct allowance for the distortions of the incident and scattered waves. These distortions can be tackled by either variational methods (Refs.2-5) or by the Drukarev integral-equation method (Ref.6-9). All these methods give approximately the same accuracy but they are very cumbersome. The approximate method proposed in the present paper is in effect a combination of the variational and Drukarev's methods. From the variational methods the authors took the idea of trial functions

Card 1/3

83350

S/139/60/000/004/006/033
E201/E591

An Approximate Allowance for the Distortion of the Incident and Scattered Waves in Collisions of Slow Electrons with Atoms and Ions

of given asymptotic form to represent the wave functions. Unknown parameters in the trial functions are found by comparing these functions with the corresponding Drukarev's wave-functions for small r , where r is the radius vector. These parameters are analytic functions of (1) coefficients which occur in the electron wave functions of an atom or an ion, (2) parameters representing the atomic core, and (3) the wave number of the incident electron. For the sake of brevity, the proposed approximate method shall be called the "expansion method". The accuracy and the speed of convergence of the consecutive iterations of the expansion method are illustrated for the case of elastic scattering of slow electrons by a static field of the form

$$U(r) = -U_0 e^{-\beta r}; \quad U_0 > 0; \quad \beta > 0 \tag{19}$$

(the results are given in Tables 1 and 2). The most important advantage of the expansion method is its extreme simplicity. The

Card 2/3

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29. 1500
16. 4100

S/139/60/000/004/007/033
E201/E591

AUTHORS: Kamenetskiy, V.D. and Yavorskiy, B.M.

TITLE: The Expansion Method and its use in Calculation of Collisions of Slow Electrons with Light Atoms

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No.4, pp.74-82

TEXT: An approximate quantum-mechanical method (the "expansion method") of dealing with collisions of slow particles is described in the preceding paper. The present paper deals with the stability of the solutions, usefulness of various approximations, accuracy of the method etc. The method is illustrated by calculations of the elastic scattering of S-electrons on the potential wells of hydrogen and helium atoms without allowance for the exchange effects, and on helium atoms with allowance for the exchange (Tables 1-4). Another example deals with excitation of the 2S levels of hydrogen atoms without allowance for the exchange effects (Table 5). The paper is entirely theoretical. Acknowledgment is made to Doctor of Physico-Mathematical Sciences G.F. Drukarev for his advice. There are 5 tables and 15 references: 5 Soviet, 1 German and 9 English. ✓

ASSOCIATION: Vsesoyuznyy zaachnyy institut tekstil'noy i legkoy promyshlennosti (All Union Correspondence Institute for the Textile and Light Industries)

Card 1/1

SUBMITTED: August 25, 1959

85159

S/139/60/000/005/005/031
E032/E114

26.2340
AUTHORS: Kamenetskiy, V.D., and Yavorskiy, B.M.

TITLE: Application of the Expansion Method to the Elastic Scattering of Slow Electrons on Heavy Atoms

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No. 5, pp 26-34

TEXT: The calculation of the cross-sections for electrons scattered on heavy atoms is more difficult than the analogous problem for light atoms. There are three reasons for this. Firstly, sufficiently accurate wave functions are only known for a limited number of heavy atoms. Secondly, the convergence of the series of partial waves in the heavy-atom case is in general considerably less rapid than in the light-atom case. Thus, for example, for helium, the S-cross-section for elastic scattering is approximately equal to the total cross-section up to 30 eV, while for heavy atoms such as, for example, Zn, Cd or Hg, the experimentally determined electron cross-sections are very different from the S-cross-section already at 1 or 2 eV. It follows that in order to obtain significant comparisons between theory and experiment in the case of heavy atoms, several partial waves must be taken into
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E032/E114

Application of the Expansion Method to the Elastic Scattering of Slow Electrons on Heavy Atoms

account even for slow electrons. Finally, in the case of heavy atoms the problem is difficult to solve because of the very large number of atomic electrons and the complicated form of their radial wave functions. There are two methods which can be used to treat this problem. The first of these is the so-called expansion method (EM) described by the present authors in Refs 1 and 2, and the second is the more accurate method of integral equations which has been described by Drukarev (Refs 3 and 4) (DMIE). The present authors have carried out calculations for Hg using both methods. The 6s wave function for mercury was taken in the form of the following three-parameter expression

$$u(r) = rR(r) = A e^{ar}(cr - r^2). \tag{1}$$

The atomic core was treated on the basis of the Thomas—Fermi statistical model. The energy of the incident electron in the field of Hg⁺⁺ was assumed to be in the form of the following two-parameter function:

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Application of the Expansion Method to the Elastic Scattering of Slow Electrons on Heavy Atoms

$$U(r) = \frac{2}{r} + \frac{a_1(r_0 - r)}{r} \quad \text{when } r \leq r_0; \quad (3)$$

$$U(r) = -\frac{2}{r} \quad \text{when } r \geq r_0,$$

where r_0 is the radius of the Hg^{++} ion and was calculated by Fermi in Ref. 18. The S, P, D and F cross-sections for elastic scattering in Hg and Ca are calculated on the basis of the above functions without taking exchange into account. A calculation of the S-cross-section for Hg including exchange effects has also been carried out. The calculations cover the range 0-22 eV. Numerical values for the various parameters involved are given as well as comparisons between calculated and experimentally determined cross-sections.

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S/139/60/000/005/005/031
E032/E114

Application of the Expansion Method to the Elastic Scattering of
Slow Electrons on Heavy Atoms

Acknowledgements are made to L.A. Vaynshteyn who supplied the
wave functions for Hg, and G.F. Drukarev for discussing the
results obtained.

There are 9 tables and 29 references: 8 Soviet, 16 English,
1 German, 2 Italian and 2 Scandinavian.

ASSOCIATION: Vsesoyuznyy zaochnyy institut tekstil'noy legkoy
promyshlennosti
(All Union Extramural Institute of Textiles and
Light Industry)

SUBMITTED: September 14, 1959

Card 4/4

KAMENETSKIY, V.D.

246520

81919

S/051/60/009/01/020/031
R201/R691

AUTHOR: Kamenetskiy, V.D.

TITLE: On the Theory and Calculations of Slow-Electron Collisions with Atoms

PERIODICAL: Optika i spektroskopiya, 1960, Vol 9, Nr 1, pp 111-113 (USSR)

ABSTRACT: The author describes a simple new method of solution of the problem of slow collisions using trial functions. The trial-function parameters are determined without using functionals (as in variation methods) or orthogonality conditions (as in the Galerkin and Krylov methods, Ref 1). Several ways of calculating the trial-function parameters are described. The new method was employed to calculate the S cross-section for elastic scattering of slow electrons on hydrogen, helium and mercury atoms (with and without allowance for exchange), S, P, D and F scattering cross-sections of slow electrons on calcium and mercury atoms without allowance for exchange, and excitation of the 2S-level of hydrogen by electron collisions. The method was employed also to deal with the triplet scattering of neutrons and protons. Comparison with

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81919

S/051/60/009/01/020/031
E201/E691

On the Theory and Calculations of Slow-Electron Collisions with Atoms

the available results of exact calculations and with the experimental data showed the high precision of the proposed new method and the little effect of the type of trial functions on the stability of the solution. The new method can be used also to calculate simple analytical approximations of the effective cross-sections, scattering amplitudes, etc. The paper is entirely theoretical. There are 4 Soviet references.

SUBMITTED: November 19, 1959

Card 2/2

KAMENETSKIY, V. D.

Cand Phys-Math Sci - (diss) "Theory and calculations of collisions of slow electrons with atoms and ions." Leningrad, 1961. 15 pp; (Leningrad Order of Lenin State Univ imeni A. A. Zhdanov); 180 copies; free; (KL, 10-61 sup, 204)

32157 R

S/139/60/000/004/007/033

E052/E414

24,4400

AUTHORS: Kamenetskiy, V.D. and Yavorskiy, B.M.

TITLE: The expansion method and its application to the theory of collisions between slow electrons and light atoms

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No.4, pp.74-82

TEXT: The "expansion method" was described by the present authors in Ref.1 (Izv. vyzov MV i SSO SSSR, Fizika, 4, 66, 1960) (preceding paper). The method can be used in approximate quantum mechanical calculations of collisions of slow particles. The present paper deals with the sensitivity of the solutions to changes in the "trial functions", the usefulness of the various approximations, the accuracy of the method, etc. The paper is concluded with a brief summary of some numerical results obtained for the scattering of electrons by helium and hydrogen. The role of exchange effects in the elastic scattering of s-electrons on helium and hydrogen is discussed. A further special case considered is that of the cross section for the excitation of the 2S-level in hydrogen (including exchange effects). The general conclusion is that although the expansion method is only an

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S/139/60/000/004/007/033
E032/E414

The expansion method ...

approximate method, nevertheless, with a suitable choice of the trial functions, adequate accuracy can be achieved. Numerical calculations showed that in the case of collisions of slow electrons with light atoms, an accuracy of 25 to 30% can be reached. In many cases the accuracy is higher still. The solutions can be obtained in simple analytical forms. The scattered amplitude is derived as an algebraic function of parameters which enter into the wave functions of the atomic electrons, the nuclear charge and the wave number of the incident electron. It is stated that the present method is very much simpler and less laborious than the variational calculations, or calculations based on Drukarev's integral equations (Ref. 2, V.A.Fck, ZhETF 10, 961, 1940 and Ref. 4, G.F.Drukarev, Doctoral Dissertation, Leningrad, 1955). Acknowledgments are made to Doctor of Physics-Mathematical Sciences, G.F.Drukarev for his advice. There are 5 tables and 15 references: 5 Soviet and 10 non-Soviet. The references to four English language publications read as follows: G.A.Erskine, H.S.W.Massey, Proc.Roy.Soc., 212A, 521, 1952; W.Kohn, Rev.Mod.Phys., 26, 292, 1954; M.J.Seaton, Proc.Roy.Soc., 241, 522, 1957; B.H.Bransden, McKie J.S.C., Proc.Phys.Soc., A69, 422, 1956.

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32157 R

The expansion method ...

S/139/60/000/004/007/033
E032/E414

ASSOCIATION: Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy
promyshlennosti (All Union Correspondence Institute
for the Textile and Light Industries)

SUBMITTED: August 25, 1959

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Card 3/3

KAMENETSKIY, V.D.

Collisions of slow particles. Izv.vys.ucheb.zav.; fiz. no.3:42-
49 '61. (MIRA 14:8)

1. Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy promyshlennosti.
(Collisions (Nuclear physics))

S/139/62/000/002/021/028
E032/E514

AUTHOR: Kamenetskiy, V.D.

TITLE: On the approximate solution of stationary problems in quantum mechanics

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no.2, 1962, 158-140

TEXT: The expansion method described in a previous paper (Izv.vuzov, Fizika, 5, 134, 1961) is extended to a more general case and a derivation is given of equations which can be used to determine the parameters of trial functions for two bodies interacting in accordance with the law $U = U(r)$. The expansion method involves the use of trial functions whose parameters can be obtained without recourse to variational procedures. The discussion is confined to the case of linear trial functions, since an explicit result can only be obtained in that case.

ASSOCIATION: Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy promyshlennosti (All Union Correspondence Institute for Textiles and Light Industries)

SUBMITTED: March 22, 1961
Card 1/1

S/139/62/000/002/022/028
E032/E514

AUTHOR: Kamenetskiy, V.D.

TITLE: Construction of trial wave functions in the quantum theory of collisions using the method of integral equations

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no. 2, 1962, 150-152

TEXT: Numerical results obtained by four methods for the amplitude of elastically scattered S-electrons with $\kappa = 0$ in the exponential field $U(r) = -U_0 \exp(-pr)$ are compared. These methods are Kohn's variational method (Phys. Rev., 74, 1763, 1948), the first and second Born approximations, the method of integral equations described by G. F. Drukarev (ZhETF, 81, 288, 1956) using the present author's trial functions and the exact method described by Morse and Feschbach (Methods of Theoretical Physics). There is 1 table.

ASSOCIATION: Vsesoyuznyy zaachnyy institut tekstil'noy i legkoy promyshlennosti (All Union Correspondence Institute of the Textile and Light Industries)
Card 1/1

SUBMITTED: October 26, 1960

KAMENETSKIY, V.D.

Approximate computation of stationary problems in quantum mechanics. Izv.vys.ucheb.zav.;fiz. 2:138-140 '62. (MIRA 15:7)

1. Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy promyshlennosti.

(Quantum theory) (Approximate computation)

KAMENETSKIY, V.D.

Establishment of test functions in the quantum collision theory
by the use of the method of integral equations. Izv.vys.ucheb.-
zav.;fiz. 2:150-152 '62. (MIRA 15:7)

1. Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy
promyshlennosti.
(Collisions (Nuclear physics)) (Quantum theory)

KAMENETSKIY, V.D.

Collisions of slow electrons with hydrogen atoms. Opt.i spektr.
12 no.5:653-654 My '62. (MIRA 15:5)
(Collisions (Nuclear physics))

KAMENETSKIY, V.D.

Study on the quantum theory of collisions. Part 1. Izv. vys. ucheb.
zav.; fiz. no.4:82-85 '63. (MIRA 16:9)

1. Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy promyshlen-
nosti.

(Collisions (Nuclear physics)) (Quantum theory)

KAMENETSKIY, V.D.

Study on the quantum theory of collisions. Part 2. Izv. vys. ucheb.
zav.; fiz. no.4:86-92 '63. (MIRA 16:9)

L. Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy promyshlen-
nosti.

(Collisions(Nuclear physics)) (Quantum theory)

L 18154-63

EWT(l)/EWT(m)/FCC(w)/BDS

AFFTC/ASD/IJP(C)

ACCESSION NR: AP3004492

S/0048/63/027/008/1027/1029

AUTHOR: Kamenetskii, V.D.; Murav'yev, V.T.

57
56

TITLE: Use of a general method for constructing trial wave functions /Report presented at the Second All-Union Conference on the Physics of Electronic and Atomic Collisions held in Uzhgorod 2-9 Oct 1962/

SOURCE: AN SSSR, Izvestiya, ser.fiz.,v.27, no.8, 1963, 1027-1029

TOPIC TAGS: electron-atom collision , wave function , scattering phase, trial function

ABSTRACT: The common methods for calculating cross sections for collision of slow electrons with atoms are based on the use of trial wave functions (Yu.N.Demkov, Variatsionny*e printsipy* v teorii stolknoveniy /Variational principles in the theory of collisions/). The present paper gives the results of trial function calculations of elastic scattering of slow s electrons by hydrogen atoms neglecting exchange and polarization. Use was made of the variational method of W.Kohn (Phys. Rev., 763, 1948) and the "general method of determining parameters" (V.D.Kamenetskiy, Izv. VYZ, Fizika, No.5, 134, 1961). The basic formulas are adduced. The results

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ACCESSION NR: AP3004492

of different calculations of scattering phases and the radial wave functions for $k = 0$ and $k^2 = 1.50$ are tabulated together with the values obtained by numerical integration. The results indicate that the suggested procedure for constructing trial wave functions provides a high degree of accuracy of the deduced scattering phases and wave functions, and that these functions are obtained in simple form suitable for analytic calculations. Orig.art. Has: 3 formulas and 3 tables.

ASSOCIATION: Vsesoyuzny*y zaochny*y institut tekstil'noy i legkoy promishlennosti; Moskovskiy tekstil'ny*y institut (All-Union Correspondence Institute of the Textile and Light Industry; Moscow Textile Institute)

SUBMITTED: OO

DATE ACQ: 26Aug63

ENCL: OO

SUB COD: PH

NO REF SOV: 010

OTHER: 005

Card 2/2

ACCESSION NR: AP4020304

S/0139/64/000/001/0107/0113

AUTHOR: Kamenetskiy, V. D.

TITLE: Investigations in quantum theory of collisions. 3

SOURCE: IVUZ. Fizika, no. 1, 1964, 107-113

TOPIC TAGS: elastic scattering, quantum theory, collision frequency, nonrelativistic theory, hydrogen atom, potential field

ABSTRACT: A method for the exact solution of elastic particle scattering in the nonrelativistic quantum collision theory of spherically-symmetric potential fields has been outlined. The wave function is extended analytically to the neighborhood of an irregular singular point, and the phase scattering η_p is obtained by means of a power series in r , in the asymptotic domain, or,

$$R_l(r) = \sum_{n=0}^N a_{n+1+n} r^{l+1+n} p$$

for large $r-r'$ and r'' . A relationship is established between the S-matrix and the function $D_l(k)$ automatically satisfying the unitarity of the S-matrix. This is
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ACCESSION NR: AP4020304

given by

$$S_j(k) = \frac{D_j'(k)}{[D_j(k)]^2} = \frac{D_j'(k)}{D_j^2(k)}$$

The method is applied to the problem of elastic electron scattering on hydrogen and helium atoms without exchange consideration. The potential field is given by

$$V(r) = -2z \left(\frac{1}{r} + a \right) \exp -2ar.$$

The fast convergence of the wave function is studied and numerical results are obtained for the S- and P- wave scattering. Numerical integration is also obtained for D-waves (1 - 2), F-waves (1 - 3) and G-waves (1 - 4) to third order accuracy of the wave function. Orig. art. has: 17 formulas and 5 tables.

ASSOCIATION: Vsesoyuzny*y zaachny*y institut tekstil'noy i legkoy promy*shlennosti
(All-Union Correspondence Institute of Textile and Light Industries)

SUBMITTED: 31Aug62

DATE ACQ: 31Mar64

ENCL: 00

SUB CODE: GP

NO REF SOV: 004

OTHER: 003

Card 2/2

L 2227B-56 EWP(l)/EWP(m)/EWP(t) IJP(c) AT/JD/JG

ACC NR: ARG005195

SOURCE CODE: UR/0058/65/000/009/0005/0005

SOURCE: Ref. zh. Fizika, Abs. 9D40

H6

AUTHORS: Kamenetskii, M. D.; Murav'yev, V. T.

B

TITLE: Calculation of effective cross section of elastic scattering of slow electrons by mercury atoms

REF SOURCE: Tr. Kom. po spektroskopii. AN SSSR, t. 2, vyp. 1, 1964, 131-135

TOPIC TAGS: electron scattering, scattering cross section, elastic scattering, wave function, mercury, valence electron

TRANSLATION: The method of similar wave functions, in which the parameters are determined without resorting to variational methods, is used to calculate with and without account of the exchange the cross section for elastic S-scattering of slow electrons by unexcited mercury atoms. The function $\chi_e(r)$ from the integral-equation method was used as the trial function. Wave functions were used to describe the valence electrons, and the statistical method was used for the atomic residue. The results of the calculations are discussed.

SUB CODE: 20

Card 1/1 nst

ACCESSION NR: AP4036558

S/0139/64/000/002/0060/0065

AUTHOR: Kamenetskiy, V. D.

TITLE: Investigation of the quantum theory of collisions. 4

SOURCE: IVUZ. Fizika, no. 2, 1964, 60-65

TOPIC TAGS: quantum mechanics, elastic scattering, inelastic scattering, distorted wave approximation, scattering amplitude

ABSTRACT: An analytic method for the exact solution of the quantum mechanical problem of elastic scattering in the distorted wave approximation, which was previously developed by the author (Izv. vuzov SSSR, Fizika No. 4, 82, 1963.; No. 4, 86, 1963.; No. 1, 107, 1964.), is generalized to the problem of electron scattering with atomic excitation. The incident electrons are considered to have sufficiently small energies so that only the term $f_0^{(0)}$ of their total wave function $f^{(0)}$ need be considered. Generalization to $\ell \neq 0$ is simple but leads to cumbersome equations. The angular part of the solution being known, the problem reduces to the solution of the radial equations

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ACCESSION NR: AP4036558

$$f_l^{(0)}(k_0, r) + [k_0^2 - V_{00}(r)] f_l^{(0)}(k_0, r) = 0;$$

$$f_l^{(0)}(k_1, r) + \left[k_1^2 - V_{11}(r) - \frac{l(l+1)}{r^2} \right] f_l^{(0)}(k_1, r) =$$

$$= V_{10}(r) f_l^{(0)}(k_0, r)$$

with the boundary conditions

$$f_l^{(0)}(k_i, 0) = 0; \quad \text{where } \delta_{01}$$

$$l = 0, 1;$$

$$f_l^{(0)}(k_i, r) \sim u_l(k_i, r) \delta_{01} - q_l^{(0)} \theta_l(k_i, r),$$

$$r \rightarrow \infty \quad l = 0, 1, \dots$$

is the delta function, k_0 and k_1 are the wave numbers of the electrons, and $q_l^{(1)}$ is the scattering amplitude. The remaining terms are defined in the previous works. The function describing the inelastically scattered electrons is given by an expression of the form

$$f_l^{(0)}(k_1, r) = D_l^{(0)}(k_0) B_l^{(0)}(r) + D_l^{(0)}(k_1) R_l^{(0)}(k_1, r).$$

The scattering amplitude is given by an expression of the form

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$$q_i^{(1)} = \frac{1}{k_1 |D_0^{(0)}(k_1)|^2} \left[D_0^{(0)}(k_0) \operatorname{Im} \frac{(D_1^{(0)}(k_1))^* D_1^{(1)}(k_1)}{D_0^{(0)}(k_0)} + D_1^{(1)}(k_1) \operatorname{Im} D_1^{(0)}(k_1) \right]$$

As an example, the excitation of the 2S level of the hydrogen atom from the ground state is considered. Orig. art. has: 33 equations.

ASSOCIATION: Vsesoyuznyy zaachnyy institut tekstil'noy i legkoy promyshlennosti (All-Union Correspondence Institute of Textile and Light Industry)

SUBMITTED: 03Jan63

DATE ACQ: 05Jun64

ENCL: 00

SUB CODE: GP

NO REF SOV: 005

OTHER: 002

Card 3/3

L 2726-66 EWT(m)/T/EWA(m)-2

ACCESSION NR: AFS017175

UR/0139/65/000/003/0035/0041

AUTHOR: Kamenetskiy, V. D. 44, 56, 19, 41, 45

27
25
B

TITLE: Scattering of Dirac particles in an external field with account of radiation losses

SOURCE: IVUZ. Fizika, no. 3, 1965, 35-41

TOPIC TAGS: spinor, wave function, relativistic quantum mechanics

ABSTRACT: A method previously proposed by the author (Izv. Vuzov SSSR, Fizika No. 2, 60, 1964 and earlier papers) for solving radial equations for nonrelativistic problems involving the collision of particles, based on the use of generalized power series, is now generalized to include the relativistic case. The method is applied in general to the solution of scattering of arbitrary particles with spin 1/2 in arbitrary fields, although particular interest is attached to cases when the strong interactions between the particles and the external field prevent the use of perturbation theory. An exact solution of the Dirac equation is first obtained in a central static scalar external field. To facilitate numerical calculations the author presents also an approximate solution of the same problem, obtained by a method developed by him earlier (Opt. i spektr. v. 9, 111, 1960), using the method of trial wave functions to determine the parameters of the problem with-

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ACCESSION NR: AP5017175

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out the use of variational methods. The radiative corrections are taken into account in both the exact and approximate solutions, and recurrence formulas for the calculations are derived. The method can also be used for the calculation of the scattering of the Klein-Gordon particles (with zero spin). Orig. art. has: 24 formulas.

ASSOCIATION: Vsesoyuznyy nauchnyy institut tekstil'noy i legkoj promyshlennosti
(All-Union Extension Institute of the Textile and Light Industries)

SUBMITTED: 16Nov63

ENCL: 00

SUB CODE: NP ^{44.55}

NR REF SOV: 012

OTHER: 008

mlb
Card *p/s*

1. 2709-56 EWT(m)/T/EWA(m)-2

ACCESSION NR: AF5017181

UR/0139/65/000/003/0101/0104

AUTHOR: Kamenetskiy, V. D.

44, 55

*28
29
3*

TITLE: Contribution to research on nonrelativistic theory of particle scattering

SOURCE: IVUZ, Fizika, no. 3, 1965, 101-104

17, 11, 55

TOPIC TAGS: quantum theory, scattering amplitude, wave function, particle collision

ABSTRACT: The author considers the scattering of particles in a central static field, using a modification of a method developed by him earlier (Izv. Vuzov SSSR, Fizika, No. 4, 86, 1963 and No. 1, 107, 1964). The modification consists of separating in the wave function of the scattered particle, in explicit form, the oscillating part that converges slowly at large values of the radius, so that the summation of the power series employed in the calculations is greatly facilitated. This reduces greatly the labor entailed in the numerical calculations for the solution of radial equations in nonrelativistic quantum theory of collisions. Orig. art. has: 16 formulas,

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L 2709-65

3

ACCESSION NR: AP5017181

ASSOCIATION: Vsesoyuznyy nauchnyy institut tekstil'noy i legkoy promyshlennosti
(All Union Extension Institute of the Textile and Light Industries)

SUBMITTED: 10Dec64

ENCL: 00

SUB CODE: NPGP ^{44, 55}

NR REF SOV: 004

OTHER: 001

Card ^{MC} 2/2

5(2)

SOV/63-4-1-22/31

AUTHORS: Vladimirov, A.M.; Velovik, B.M.; Gavrilova, L.A.; Kamenetskiy, V.I.; Krol', V.A.

TITLE: Continuous Method for Preparing Titanium Trichloride (Neprieryvnyy sposob polucheniya trekhkhloristogo titana)

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr 1, p 132 (USSR)

ABSTRACT: A laboratory device for the preparation of $TiCl_3$ is described here. It consists of an evaporating device (1), a heater for $TiCl_4$ vapors (2), an electric furnace (3), a cooler (4) and a container (5). The method is based on the reduction of $TiCl_4$ by hydrogen at 820 - 840°C. The output of the device is 10 - 15 g per hour. The reaction proceeds at a considerable excess of $TiCl_4$ (10 : 1 or 20 : 1) which prevents the formation of $TiCl_2$. The produced $TiCl_3$ is 98% pure. There are: 1 diagram and 6 references, 2 of which are Soviet, 2 American, 1 English and 1 German.

Card 1/2

Continuous Method for Preparing Titanium Trichloride SOV/63-4-1-22/31

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo
kauchuka (All-Union Scientific Research Institute of Synthetic
Rubber)

SUBMITTED: June 23, 1958

Card 2/2

KAMENETSKIY, V.K.

Diagnosis of the occlusion of the carotid artery. Zhur. nevr. i
psikh. 65 no.4:502-507 '65.

(MIRA 18:5)

1. Nevrologicheskoye otdeleniye (zavoduyushchiy - prof. G.Z. Levin)
Psikhonevrologicheskogo instituta im. Bekhtereva, Leningrad.

KAMENETSKIY, V.K.

Relationship between the arterial and cerebrospinal fluid pressures
in insultus. Zhur. nevr. i. psikh. 63 no.6:862-866 '63.

(MIRA 17:6)

1. Psikhonevrologicheskiy institut imeni V.M.Bekhtereva (nauchnyy
rukovoditel' - doktor meditsinskikh nauk G.Z. Levin) Leningrad.

POPRLYUK, P.F., kandidat meditsinskikh nauk; KAMENETSKIY, V.T.; SIDOROVA, A.F.

Therapeutic effect of mineral waters from Morshin. Vrach.delo no.2:
203-204 P '56. (MLRA 9:7)

1. Morshinskiy sanatoriy VTsSPS.
(MORSHIN--MINERAL WATERS)